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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/159,104	09/23/1998	FUMIO DENDA	981091	4736
23850	7590	03/03/2004	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			PENDLETON, BRIAN T	
		ART UNIT		PAPER NUMBER
		2644		12

DATE MAILED: 03/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/159,104	DENDA, FUMIO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Brian T. Pendleton	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 16 December 2003.  
 2a) This action is **FINAL**.                                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1,4,16 and 17 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1,4,16 and 17 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

### ***Response to Amendment***

The amendment sent on 12/16/03 will be entered. The merits of the amended claims are discussed below.

### ***Response to Arguments***

Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "attenuation process" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 also recites the limitation "wherein the region attenuation process is performed to either one or a combination of more than two of said regions" which is confusing to the Examiner. The claim only specifies two regions therefore there cannot be a combination of more than two regions. For the purpose of claim merits, the predetermined frequency region of the region attenuated sound is either the region

under the range between 1800 Hz and 7000 Hz, the region over the range between 2000 Hz and 7000 Hz or a combination of the two regions.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 4 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Beller et al. In figure 1, Beller discloses an auditory training method and apparatus comprising an original sound Oe processed by audio frequency converter CAF. The audio frequency converter CAF varies the amplitude and frequency of the original sound to produce a parametric signal S. See column 3 line 34 – column 4 line14. Column 11 lines 50-57, state that the parametric signal S is low-pass filtered using a capacitor to remove harmonics. Thus, an original sound is processed to form a region attenuated processed sound, the attenuation region being the high frequency range that includes

voice harmonics. Inherently, voice harmonics are found in the range above 7000 Hz, therefore the predetermined frequency region is in the region above the range 2000 Hz – 7000 Hz. As discussed in column 10 lines 63-67, the user alternatively hears the original sound and the parametric sound, thus the feature of alternating the original sound and processed sound is met and all of the claim limitations are met. As to claim 4, since the output signal S is parametric and varies according to the amplitude and frequency of the input signal Oe, the processed signal will have a varying frequency content and the frequencies filtered by the capacitor will change randomly. Regarding claim 17, column 11 lines 1-3 state that the period of alternating between the original sound and processed sound is based on phonemes, syllables or syntax elements, all of which are between .1 seconds and 7 seconds.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beller in view of Merzenich et al. Beller teaches an auditory training system comprising alternating between processed and unprocessed sound. Beller does not specify that the interval between the processed and unprocessed (original) sound changes randomly. Merzenich et al discloses a listening training system whereby the interval between sounds heard by the user changes (decreases). Therefore it was already

taught in the art of auditory training that varying the time between sounds to be interpreted by the user can increase their ability to comprehend the sounds over time. Thus, it would have been obvious to one of ordinary skill in the art at the time of invention to change the interval length between the original and parametric (processed) sound in the Beller invention.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

1.2.25

Brian Tyrone Pendleton  
March 1, 2004

*Min Sun Oh Harvey*  
MIN SUN OH HARVEY  
PRIMARY EXAMINER